



Bit By Bit: Communicating Voucher Information To The Accounting Department From Automated Library Systems.

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BIT BY BIT

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Communicating voucher information to the accounting department from automated library systems.

This is the first of a two-part article. Part I presents general considerations involved in the automation process while Part II will discuss technical issues with examples from the NOTIS and INNOVACQ systems.

A topic of interest to many acquisitions librarians and business managers is the transfer of financial information about book orders to the accounts payable office. Many libraries that are "fully automated" must still type book order information into their local system, then retype this information onto their institution's voucher form. After approval by a library business administrator these vouchers are typically sent to accounts payable where they are again coded into the system which will ultimately produce checks for book vendors. Everyone agrees that this process is cumbersome and should be streamlined, but for a number of reasons these duplicated tasks continue to be performed in the library and the bursar's office.

The best way to convince administrators in the library and comptroller's office that automated transfer of financial data is important is to demonstrate the savings in time and money that such a system provides. It is relatively easy to quantify the amount of staff time spent typing and retyping forms in the library and at accounts payable.

As an example, if a staff member in the library creates a voucher in five minutes, and creates fifty vouchers in a day the time saved would be more than twenty hours per week. If this work is then duplicated by accounts payable staff, the savings would be more than forty hours per week. These estimates do not take into consideration the time necessary to

move invoices and/or vouchers from desk to desk within the library as documents travel from receivers to approvers in the acquisitions department then on to business office data entry and to business administrators for signature.

Ideally, the new system would only require that library staff match a machine produced voucher with a copy of the appropriate invoice. These documents would then be forwarded to the comptroller for verification of the check and be filed there for future audits.

Other advantages to automated transfer are the elimination of errors due to re-keying information and speedier production of checks. In short, the automated procedure is faster, cheaper and more accurate. The following are some issues which need to be addressed when the library decides to automate its voucher production process:

Is the comptroller's office amenable to change? Aside from a sort of "institutional inertia" that often makes changes to long-used and proven procedures hard to revise, the office may have some very reasonable reservations about modifications to the way they collect and input financial data. They will insist on preserving the integrity of the data processed. They may still want to keep invoices and vouchers as a paper trail for reference by auditors. They may wish to continue for a period to perform the transfer manually as well during a test of the new process. The librarians will need to convince them that its system software and staff are reliable.

The accounts payable office may be more willing to discuss automated datafile transfer if other campus entities (eg. bookstore, food service) are already loading financial tapes. If such transfers are already in process, the library may need to conform to specifications and schedules but find negotiations much easier to initiate.

Can the library staff and software provide the necessary information?

The library administration must be committed to the changes necessary and provide its staff with the support necessary to bring about automated transfer. Current ordering, receiving and accounting procedures within the library should be analyzed to see how the new system will affect workflow and staff duties. Where are the bottlenecks and duplicated efforts? How much verification needs to be done before data is sent to Accounts Payable. How will errors be caught and corrected? Is there less accounting security with the new system?

The library's software must be able to provide the information necessary for the transfer. The module which does the fund accounting and voucher production must be accurate and dependable. Systems staff need to be knowledgeable about the strengths and limitations of the software and dedicated to the successful implementation of new procedures.


Who should be at the planning meetings? When members of the library and comptroller's office staff meet to discuss automation it is important that several departments be present. Staff from the library should include representatives from acquisitions/collection management, the business office and the systems department. The comptroller's office should have representatives from accounts payable, data entry, and data processing.

Is a partial solution better than nothing? It is not necessary for the library to move to the fully automated transfer of data in one giant leap. There are a number of smaller steps that can ease us into a more efficient method of communicating with the comptroller's office. One starting point would be for the library to negotiate with accounts payable for the acceptance of the library's machine produced voucher in lieu of the institution's "official" form. As long as the new voucher

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contains all the information present on the old form, a good case could be made for eliminating duplication of effort in the library.

It may not be efficient to transfer all data through magnetic tapes or electronic means. It may make sense to use one method to create checks for major book vendors who receive payments on a weekly or monthly basis and another method for one-time payments to vendors from whom the library orders items only irregularly.

In the next issue of ATG, Part II will investigate some of the technical details involved in linking the library and accounts payable systems. The editors invite readers interested in the topic to send in their questions, comments, and experiences. 



Bit by Bit

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Communicating voucher information to the accounting department from automated library systems

This is the second of a two-part article. Part I (ATG Feb. 1991) presented some general considerations about the value of the automation process, the time and effort saved and the improved accuracy achieved by eliminating redundant data entry. Part II will present the rudiments of how your library's acquisitions and systems staff can put this process into production.

The university's accounts payable department will probably be most comfortable (at least at first) with vouchers transmitted on tapes. Diskettes or transmission over the network are also possible, or you may be in an environment where the same mainframe is running both the library and accounts payable software, but tapes are a good way to begin. It is also a good idea to provide printed vouchers as a backup, for auditing purposes and as a "security blanket" for those who have to take responsibility for the large monetary expenditures involved in the book acquisitions process. Nobody needs to look at the paper but it is comforting (and perhaps legally mandatory) to know a paper audit trail is available.

The following instructions are specific to the library software designed by NOTIS Systems Inc., but any library automation software which can bring together the pieces of information needed should be able to produce a tape for accounts payable.

The data needed for each transaction is fairly concise and can usually fit into a small string we may visualize in the 80-column card format. Programs in accounts payable's software package should be able to read 80-byte records from the library's tape and translate these into payments to vendors. These short records would consist of the following data elements:

Vendor ID Number

This is the identification number used by

accounts payable to keep track of the organizations to which they write checks. They will have one number for B/NA and another for Midwest if your order books from these vendors. The acquisitions department will need to obtain (and maintain) an up to date ID list from accounts payable and insert this number into the vendor record. The best place to insert the number is in the vendor name field after the company's name. Use an asterisk before the number starts to help the extract program identify where this data begins. A sample would be:

NAME:

Faxon Company

*0003817238

ADDRESS:

15 Southwest Park
Westwood MA 02090

Invoice Number

This is the number generated by the vendor which identifies their invoice. It is usually a field in the invoice record.

Invoice Date

This is normally the date the invoice was sent to you by the vendor.

Invoice Amount

This is the total dollar amount for this invoice. It will usually be a positive amount but may be a credit (a negative amount) if you have overpaid the vendor.

Library Account Number

This is the library account ID which accounts payable will debit or credit. It may always be the same library fund number or may be extracted from the voucher (it is the OFFICIAL ID in a NOTIS fund record).

Transaction Date

Today's date (the computer system date).

Each of these data elements would be present in specific columns of each 80-byte record. A final "card" would specify the total number of preceding records and a "hash total" (a total of all dollar amounts added together, ignoring whether they were debits or credits) used by

the accounting software as a check on the integrity of the data that it has just read.

It turns out that all of this information is available when the NOTIS voucher printing program (LD200) is run. The tape extract program is run on this print file and extracts the pieces of information needed by accounts payable.

Tape Extract Program

This short program should probably be written in REXX or PL/I, but other languages will do as well. It parses through the print file line by line extracting the needed data using label constants like Page 1, the asterisk, IN-VOICENO:, TOTAL, etc. As the program processes the print file it writes an 80-byte record for each voucher that has the accounts payable ID number (the one after the asterisk) and does not write a record for vouchers of vendors that will be handled manually. It also keeps track of the hash total and writes this final record to the output file.

If your NOTIS system is running under IBM's MVS or VSE operating systems, you may wish to run LD200 once with its output to a sequential file instead of to a print file (without executing the final step which reformats the voucher file) and a second time to produce the voucher printout. If MVS or VSE is a "guest" of the VM operating system you may wish to spool the file to VM for extracting and printing.

The library will probably need to adjust the frequency of voucher production to match accounts payable's payment cycle. Someone on each end will need to be responsible for seeing that the tape is produced, delivered, processed, and recycled. There should also be persons responsible for answering questions and resolving the problems that will inevitably arise. A "dry run" where a tape is processed and dummy checks are printed and then carefully verified is a good way to locate any bugs and provide solace to the fearful.

The editors invite readers interested in the topic to send in their questions, comments and experiences. ☛